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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/679,554	10/06/2003	Kanwal Bhatia	10541-1859	3287

7590 09/21/2005

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EXAMINER

HOPKINS, ROBERT A

ART UNIT	PAPER NUMBER
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1724

DATE MAILED: 09/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/679,554

Applicant(s)

BHATIA ET AL.

Examiner

Robert A. Hopkins

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 7 is/are rejected.
- 7) ☒ Claim(s) 6 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 10-6-03.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-5 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Utter et al(5421708).

Utter et al teaches an oil separator for a compressor comprising a wall(54) with an inner surface, the inner surface defining an inner chamber with a separator region and an oil accumulation region(152), the separator region having an impingement surface, a mixture inlet(see figure 2) that provides a passageway for an oil gaseous refrigerant mixture to flow from the exterior of the separator into the inner chamber(145) of the separator, a gas outlet(58) that provides a passageway for the gaseous refrigerant from the separator region to the exterior of the separator, and an oil outlet(not numbered but in equivalent to 208 in figure 6 and in connection with reservoir 152) that provides a passageway for separated oil from the accumulation region to the exterior of the separator, the oil being separated from the oil gaseous refrigerant mixture as the mixture impinges against the impingement surface, the separated oil draining into the accumulation region from wherein the oil exits the separator through the oil outlet. Utter et al further teaches wherein the mixture inlet, the gas outlet, and the oil outlet are apertures in the wall. Utter et al further teaches wherein the mixture inlet, the gas

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outlet, and the oil outlet are tubular structures that traverse the wall from the exterior of the separator to the inner chamber. Utter et al further teaches wherein the longitudinal axes of the gas outlet and oil outlet are substantially parallel, and the longitudinal axis of the mixture inlet is substantially perpendicular to the axes of the gas and oil outlets.

Utter et al further teaches wherein the impingement surface has a substantially hemispherical shape.

Claim 7 is rejected under 35 U.S.C. 102(b) as being clearly anticipated by Utter et al(5421708).

Utter et al teaches a compressor(10) comprising a housing with at least one cylinder bore(within lower shell portion 16) ,the cylinder bore being provided with a suction inlet(25) and a compression outlet(36),a front head covering a first end of the housing, a rear head covering a second end of the housing, an oil separator formed in the rear head, the oil separator including an oil gaseous refrigerant mixture inlet(see figure 2) that communicates with the compression outlet, a gas outlet(58), an oil outlet(not numbered but in equivalent to 208 in figure 6 and in connection with reservoir 152), and an oil accumulator(152) in which separated oil accumulates, a portion of the separator having a substantially hemispherical shape chamber(54) in which oil is separated from the refrigerant as the mixture impinges against a surface of the chamber, the separated oil accumulating in the accumulator and exiting the separator through the oil outlet, and the refrigerant exiting the compressor through the gas outlet(leading to discharge fitting 62).

***Allowable Subject Matter***

Claim 6 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim 6 recites "the accumulation having a terminal end sloped relative to the entrance so that the separated oil flows from the entrance towards the terminal end". Utter et al teaches an entrance region and an accumulation region, however the accumulation region does not have a terminal end sloped relative to the entrance so that the separated oil flows from the entrance towards the terminal end. It would not have been obvious to someone of ordinary skill in the art at the time of the invention to provide a accumulation region having a terminal end sloped relative to the entrance so that the separated oil flows from the entrance towards the terminal end because Utter et al does not suggest such a modification.

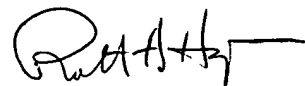
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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert A. Hopkins whose telephone number is 571-272-1159. The examiner can normally be reached on Monday-Friday, 7am-4pm, alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on 571-272-1166. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Rah  
September 19, 2005

  
ROBERT A. HOPKINS  
PRIMARY EXAMINER  
A-4.1724